

**United States District Court**  
For the Northern District of California

E-filed: 11/21/2008

IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF CALIFORNIA  
SAN JOSE DIVISION

RAMBUS INC.,

Plaintiff,

v.

HYNIX SEMICONDUCTOR INC., HYNIX  
SEMICONDUCTOR AMERICA INC.,  
HYNIX SEMICONDUCTOR  
MANUFACTURING AMERICA INC.,

SAMSUNG ELECTRONICS CO., LTD.,  
SAMSUNG ELECTRONICS AMERICA,  
INC., SAMSUNG SEMICONDUCTOR, INC.,  
SAMSUNG AUSTIN SEMICONDUCTOR,  
L.P.,

NANYA TECHNOLOGY CORPORATION,  
NANYA TECHNOLOGY CORPORATION  
U.S.A.,

Defendants.

No. C-05-00334 RMW

ORDER CLARIFYING THE COURT'S  
CONSTRUCTION OF "MEMORY DEVICE"

[Re Docket No. 2066]

RAMBUS INC.,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD.,  
SAMSUNG ELECTRONICS AMERICA,  
INC., SAMSUNG SEMICONDUCTOR, INC.,  
SAMSUNG AUSTIN SEMICONDUCTOR,  
L.P.,

Defendants.

No. C-05-02298 RMW

[Re Docket No. 1020]

ORDER CLARIFYING THE COURT'S CONSTRUCTION OF "MEMORY DEVICE"

C-05-00334 RMW; C-05-02298-RMW; C-06-00244-RMW

TSF

1 RAMBUS INC.,  
2 Plaintiff,  
3 v.  
4 MICRON TECHNOLOGY, INC., and  
5 MICRON SEMICONDUCTOR PRODUCTS,  
6 INC.  
7 Defendants.

No. C-06-00244 RMW

[Re Docket No. 1415]

8 Rambus has filed a motion for leave to file a motion for reconsideration regarding the court's  
9 construction of the term "memory device" in the Farmwald/Horowitz patents. To ensure that the  
10 court had not committed a "[a] manifest failure," the court granted the motion and requested a  
11 response from the Manufacturers. The court has reviewed the papers and its prior order. For the  
12 following reasons, the court clarifies its prior construction of the term.  
13

14 In its prior order, the court construed the term "memory device" to mean "a device in which  
15 information can be stored and retrieved electronically." *Rambus Inc. v. Hynix Semiconductor, Inc.*,  
16 569 F. Supp. 2d 946, 972-74 (N.D. Cal. 2008). The court rejected Rambus's request that the term be  
17 read as "an integrated circuit device in which information can be stored and retrieved electronically,"  
18 which incorporated a limitation that the device be on a single chip. *See id.* at 971-72. At the time,  
19 the court noted that it could not fully grasp the nature of the claim construction dispute without some  
20 understanding of the Manufacturers' invalidity contentions. *Id.* at 971. As those contentions have  
21 begun to come to light, the dispute between the Manufacturers and Rambus with respect to the  
22 meaning of the asserted claims has come into focus. This has permitted the court to reevaluate its  
23 claim construction and refine its scope. *Cf. Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323,  
24 1329 (Fed. Cir. 2008) (suggesting the wisdom of an iterative approach to claim construction).

25 The court remains convinced that there is no basis for reading a "single chip" limitation into  
26 the term "memory device." The specification discusses no such limit, and at various times, Rambus  
27 crafted dependent claims suggesting that a "memory device" is a broader concept than a single chip.  
28 Moreover, had Rambus meant to limit its claims to a single chip, it could have claimed a "memory

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1 chip" or used a similarly clear limitation. It chose the broad term "device," and must live with the  
2 claims it wrote.

3 But that does not mean that the term "memory device" lacks any dimensional limit, and any  
4 limitation on the scope of the term is missing from the court's first attempt at construing it. The  
5 Farmwald/Horowitz specification does not define "memory device," but it does discuss it in relation  
6 to a "memory subsystem" and otherwise suggest some limits. For example, the specification states  
7 that "[t]he present invention includes a memory subsystem comprising at least two semiconductor  
8 devices, including at least one memory device, connected in parallel to a bus . . ." U.S. Patent No.  
9 6,426,916, col. 3, ll. 51-54. Thus, a "memory device" is limited in scale to being a component in a  
10 memory subsystem. Indeed, "[e]ach memory device contains only a single bus interface with no  
11 other signal pins." *Id.*, col. 4, ll. 13-15; col. 5, ll. 62-67.

12 This "component" interpretation of the term "memory device" is further bolstered by the  
13 detailed description. The description distinguishes "memory devices" from "processing devices."  
14 *Id.*, col. 5, ll. 33-36. A "memory device" is "a complete, independent memory subsystem with all  
15 the functionality of a prior art memory board in a conventional backplane-bus system," suggesting  
16 that a "memory device" is smaller than a prior art memory board. *Id.*, col. 7, ll. 23-26. The  
17 description repeatedly gives DRAMs, SRAMs, and ROMs as examples of "memory devices." *E.g.*,  
18 *id.*, col. 1, ll. 50-55; col. 6, ll. 16-21. Finally, the devices used in the overall system preferably have  
19 "very low power dissipation and close physical spacing" to allow for a relatively short bus (and thus  
20 higher frequencies). *Id.*, col. 18, ll. 1-5; *see also* col. 19, ll. 52-55 (describing the limited number of  
21 devices that can be connected to the preferred bus architecture because of size constraints).

22 A person of ordinary skill in the art, reading the term "memory device" in light of the  
23 specification, would not necessarily conclude that a "memory device" is limited to a single chip.  
24 Such a person of ordinary skill would, however, conclude that a "memory device" is constrained in  
25 its dimensions and features. A "memory device" does not include a microprocessor like a CPU or  
26 memory controller. It connects to a bus as a component in a larger system. While its size is not  
27 explicitly defined, it is on the order of a single chip, and smaller than a "memory board."  
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1 Condensing this understanding into a concise construction poses difficulties. The court  
2 believes the following construction captures the meaning of the term "memory device" as used in the  
3 claims and given meaning by the specification: a "memory device is a component of a memory  
4 subsystem in which information can be stored and retrieved electronically. It is smaller in physical  
5 size than that of a prior art memory board and has low power dissipation so it can be closely spaced  
6 to other components of the memory subsystem such as a processing device."

7  
8 DATED: 11/21/2008



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9 RONALD M. WHYTE  
10 United States District Judge

## United States District Court

For the Northern District of California

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2 C-05-00334, C-05-02298, C-06-00244.

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24 **Dated:** 11/21/2008

TSF  
**Chambers of Judge Whyte**

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